

Claims

1. A method for testing a plurality of driver circuits on an array glass of an active matrix organic light emitting display (AMOLED) before organic light emitting diodes are implanted, each of the driver circuits including: a scan line, a data line, a power line, a first transistor, a second transistor and a first capacitor; the method comprising the steps of:
 - (a) repeating the steps (b) ~ (e) until a first signal and a second signal outputted from each of the driver circuits are retrieved;
 - (b) enabling a target driver circuit via the scan line;
 - (c) charging the first capacitor and retrieving the first signal from the data line when the first capacitor is discharged via the first transistor;
 - (d) disposing a conductive board above the array glass to form a second capacitor between the conductive board and the array glass;
 - (e) charging the second capacitor and retrieving the second signal from the power line when the second capacitor is discharged via the second transistor; and
 - (f) analyzing the first and second signals to determine the functionality of the target driver circuit.
2. The method of claim 1, wherein the step (c) further comprises:
 - (g) providing a high level voltage onto the data line to charge the first capacitor via the first transistor;
 - (h) providing a low level voltage onto the data line to discharge the first capacitor via the first transistor; and
 - (i) retrieving the first signal from the data line while the first capacitor is discharged.
3. The method of claim 1, wherein the step (e) further comprises:

(j) providing a high level voltage onto the power line to charge the second capacitor via the second transistor;

(k) providing a low level voltage onto the power line to discharge the second capacitor via the second transistor; and

(l) retrieving the second signal from the power line while the second capacitor is discharged.

4. The method of claim 1, wherein the first and second signals are a charge signal, a voltage signal or a current signal.

5. The method of claim 1, wherein the step (f) further comprises:

(m) respectively computing an average value of the first signals and an average value of the second signals of the driver circuits;

(n) determining whether the value of the first signal of each of the driver circuits is within $\pm 75\%$ of the average value of the first signals; and

(o) determining whether the value of the second signal of each of the driver circuits is within $\pm 75\%$ of the average value of the second signals;

wherein, if the value of the first signal of the driver circuit is within $\pm 75\%$ of the average value of the first signals, the first transistor and the first capacitor of the target driver circuit has normal functionality, and if the value of the second signal of the driver circuit is within $\pm 75\%$ of the average value of the second signals, the second transistor of the target driver circuit has normal functionality.

6. A apparatus for testing a plurality of driver circuits of an active matrix organic light emitting display (AMOLED) before organic light emitting diodes are implanted, the apparatus comprising:

a pixel selection device for selecting a target driver circuit;

a signal extractor for retrieving a signal; and

a signal analyzer, connected to the signal extractor, for storing and analyzing the signal to determine the functionality of the target driver circuit.